

# **VERSATILE DISPLAY RACK**

## **BACKGROUND OF THE INVENTION**

### **Field of the Invention**

5           This invention relates to display structures. More particularly, the present invention relates to a versatile display rack for hanging miscellaneous items thereon.

### **Description of Prior Art**

          There are many styles of display racks and devices for hanging miscellaneous  
10   items such as clothing, hats, accessories, and bags. One type of conventional display rack has two or more dual columned side posts connected by a plurality of horizontal bars. One such type of rack is taught in U.S. patent number 6,029,833 issued to *Yeh*. This type of display rack has a base member connected below each of the side posts for providing balance and support. Also, there are slots, notches, and bars in predetermined levels  
15   placed throughout the height of the object so that the user can fit display arms on the desired level. A disadvantage of this rack is that all of the parts are pre-formed for mounting various display arms in fixed heights and at fixed positions. Other types of display racks utilize telescopic side posts and bars with clips for adjusting the height of the display rack or display arms. None of the prior art teaches the display rack as taught  
20   by the present invention.

          It is a primary objective of the present invention to provide a versatile display rack which has easily height adjustable displaying members for displaying items. It is another objective of the present invention to provide a display rack on which multiple display items can be hung from the front, back, and sides of the display rack at multiple  
25   heights and positions.

## **SUMMARY OF THE INVENTION**

          The present invention is contrived to overcome the conventional disadvantages. As shown in Figures 1 through 5, the display rack comprises a pair of side posts joined by  
30   a top support bar and supported by a base member. Each side post has a channel formed therethrough and is divided into an upper channel and lower channel by a bridge. At

least one slot is formed on the upper end of each side post. Additionally, one or more side support clamps can be attached to each side post through the corresponding channel, and each side support clamp is formed to be adjustable in its position along the corresponding channel. Each support clamp is also formed and positioned so that a pair of opposed support clamps on the side posts can hold one or more support bars therebetween. The display rack can further comprise one or more display bars placed between the side posts. Depending on the embodiment, the display bars can be attached alone on the side posts or in conjunction with the side support clamps. The display bar's placement along the height of the side posts can be varied, and furthermore, the display bar is formed to be removable. The display bar has a plurality of slots for receiving a supporting arm of a display structure such as hanging bars and shelves.

### **BRIEF DESCRIPTION OF THE DRAWINGS**

FIG. 1 is a perspective view of the display rack according to the present invention shown without any display bar or support clamp;

FIG. 2 is a view of a section of an embodiment of the display rack having a pair of support clamps having a pair of support bars;

FIG. 3 is a cross-sectional view of fig. 2 cut along the 4-4 line;

FIG. 4 is a view of a section of the present invention showing a support clamp having a display arm received thereto;

FIG. 5 is a perspective view of a section of an embodiment of the present embodiment having a display bar.

### **DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS**

With reference to the accompanying drawings, a display rack 10 for hanging miscellaneous items thereon according to the present invention will now be described. The display rack 10 comprises a first side post 15 and a second side post 20. Each side post 15, 20 has an elongated channel formed therethrough, and each side post 15, 20 has an upper end and a lower end. As shown in figure 1, the display rack has a top frame bar 22 connecting the side posts near the upper ends of each side post 15, 20, and a base member 25 placed near the lower ends of the side posts 15, 20 provides support to the

display rack 10. The embodiment illustrated in figure 1 shows a base member 25 having a bottom frame bar 28 connecting the side posts 15, 20 near the lower ends and a pair of elongated support members 30 extending from below the side posts 15, 20.

The embodiment illustrated in figure 1 also has a bridge 31 formed on each side post 15, 20 which divides each elongated channel into an upper channel and a lower channel. Additionally, there is at least one slot 34 formed on the upper end of each side post 15, 20.

Figures 2 to 4 show a display rack 10 having a side support clamp 35 mounted on each side post 15, 20 through the corresponding channel. Each support clamp 35 has an inner plate 37 and an outer plate 38 which is joined to clamp onto a corresponding side post 15, 20. In the embodiment as shown in figure 3, the inner plate 37 has a threaded bore which receives a threaded member protruding from the outer plate 38 for tight engagement of the inner and outer plates 37, 38. Each inner plate 37 has a plurality of slots 40 formed thereon, and the slots 40 and support clamps 35 are formed and positioned for holding one or more support bars 43 between the support clamps 35 with each end of the support bar 43 being received into a corresponding slot 40 of a corresponding inner plate 37 as shown in figure 2. Figure 2 further shows the display rack having a pair of support bars 43 placed between the support clamps 35, and each support bar 43 has a plurality of slots 46 which are formed for receiving the supporting arms 49 of a display device as shown in figure 2. The outer plate 38 of each support clamp 35 can have an outward protrusion 50 having a hole 52 therethrough for removeably receiving a display arm 53 therein as shown in figure 4. Figure 3 illustrates an embodiment of the structure of the outward protrusion 50 for holding a display arm 53 thereon. As shown in figure 3, the outward protrusion has an outer end having a threaded bore leading into the hole 52 formed through the protrusion 50. An end piece 57 having a threaded protrusion twistably engages with the outward protrusion 50 such that the threaded protrusion of the end piece 57 can enter into the hole 52 through the threaded bore as the end piece 57 is tightened onto the outward protrusion 50.

The versatile display rack can further comprise a display bar 60 placed between the side posts 15, 20 as shown in figure 5. As shown, the display bar 60 has an end extending through the corresponding channel of each side post 15, 20. The display bar 60

has a pair of connection members 65 for removeable connection to each side post 15, 20 so that the height of the placement of the display bar 60 can be varied along the side posts 15, 20. As shown in figure 5, each connection member 65 has an outer plate 68 and an inner plate 70 which can be moved together to clamp onto a side post placed  
5 therebetween. The display bar 60 further has a plurality of slots 70 for receiving a supporting arm 80 of a display structure 85 therein.

In use, the display rack is extremely versatile. The one or more slots formed at the upper end of each side post can hold a mirror therebetween or a display bar for further attachment of display arms thereon. In addition a plurality of side support clamps 35  
10 can be mounted on each side post 15, 20 as desired through the corresponding channel. Each side support clamp 35 can be varied in height throughout each side post according to the desired height requirements of the user. One or more support bars 43 can be placed between each pair of opposed support clamps 35 as desired. Each support bar 43 has a plurality of slots 46 which are formed for receiving the supporting arms 49 of a  
15 display device which can range from hanging bars to shelves. The supporting arms 49 can hang from the support bars 43 frontward, backward, or sideward relative to the display rack. The display rack can further comprise one or more display bars 60 placed between the side posts 15, 20 as shown in figure 5. The display bars 60 can be used by themselves on the side posts or in conjunction with the side support clamps 35 according  
20 to the preference of the user. The display bar 60 is versatile in that its height can be varied along the side posts 15, 20 and furthermore, the display bar 60 can be removed if necessary. The display bar 60 further has a plurality of slots 70 for receiving a supporting arm 80 of a display structure 85 ranging from hanging bars to shelves.

Although a preferred embodiment of the invention has been described and  
25 illustrated for purposes of clarity and example, it should be understood that many changes, substitutions and modifications to the described embodiment will be apparent to those having skill in the art in light of the foregoing disclosure without departing from the scope and spirit of the present invention which is defined by the claims which follow.